OBSTACLES TO ADDING A FIFTH PRESIDENTIAL FACE

A Technical, Historical, and Legal Analysis of Mount Rushmore National Memorial

Geology, engineering monitoring, preservation policy, federal legislation, and the legal status of the Black Hills

Version 2.2.0 — July 4, 2026

Independent technical and historical review — not advocacy, comment, or participation in any proceeding

1. Executive Summary

This report examines the geologic, engineering, preservation-policy, legal, and cultural obstacles to carving a fifth presidential face — specifically Donald Trump's — onto Mount Rushmore National Memorial. Findings are built from primary sources: National Park Service (NPS) materials, a 2008 NPS Geologic Resource Evaluation Report, a 1970 USGS hydrogeology paper, a 2014 Kent State University fracture study, named engineering professionals who have monitored the memorial, and current reporting on the proposal's legislative and political status. The scope and limitations of this analysis are stated explicitly in Sections 2.2 and 2.3, and a confidence label accompanies every major finding (legend in Section 15) so the strength of the underlying evidence is transparent throughout.

The NPS's public position — given to the New York Times in a statement published June 27, 2025 — is direct: “the carved portion of Mount Rushmore has been thoroughly evaluated, and there are no viable locations left for additional carvings.”

That position is independently corroborated by named engineering professionals on the record with the same outlet: Paul Nelson, the geomechanical engineer who supervised the memorial's Rock Block Monitoring System for RESPEC (the firm responsible for the monument's engineering monitoring), and David Barna, a former NPS spokesperson and geologist — both stating plainly that no rock nearby is stable enough to carve without risking the existing sculpture.

Based on the evidence evaluated in this report, the overall conclusion — that no location on the carved face could support a new bust without unacceptable risk — is best characterized as strongly supported by named professional testimony and by consistent institutional and geologic sources, rather than as established by a dedicated, site-specific geotechnical design investigation, which was not identified in the public record and is not claimed here. Section 2.3 states explicitly what this analysis does and does not cover.

This report keeps four distinct kinds of “obstacle” separate rather than blending them: an engineering question (can it physically be carved), a preservation-policy question (would the NPS permit it), a legal question (could Congress or the executive authorize it), and a cultural/legal-title question (does the land's disputed legal history create independent exposure). Sections 4–14 are organized along these four lines.

Two recurring points in public coverage deserve particular care, since press accounts of Mount Rushmore's construction sometimes describe them inconsistently: the direction of Jefferson's original,

abandoned carving location (Section 8), and the age and scope of the Kent State University fracture/LiDAR research, which dates to 2014 and is a separate effort from the memorial's ongoing engineering monitoring program (Section 9).

As of July 4, 2026: President Trump has visited Mount Rushmore for the America250 Independence Day observance; the White House press office said there would be “no better addition” to the monument than Trump; Interior Secretary Doug Burgum has said publicly that there is room for another face; and Rep. Anna Paulina Luna's bill directing the carving (H.R. 792, 119th Congress, introduced January 28, 2025) remains in committee with no cosponsors, hearing, or vote. No carving has been approved, funded, or initiated by the NPS.

2. Purpose, Scope, and Method

2.1 Purpose and method

This report builds its claims directly from primary sources and uses the confidence labels defined in the legend in Section 15 for every major finding. Primary sources include the 1868 Fort Laramie Treaty, the 1980 Supreme Court ruling in United States v. Sioux Nation of Indians, Gutzon Borglum's own 1936 letter, named on-the-record engineers, NPS and USGS geologic publications, and 2025–2026 legislative and news reporting.

A methodological note on directional language: sources describing which “side” a carving occupies are frame-dependent — “Washington's right” can mean Washington's own anatomical right hand (which appears on the visitor's left as one faces the mountain) or the visitor's right as seen from the viewing terrace. Both conventions appear in press coverage of Mount Rushmore's construction history, and conflating them is a plausible source of the error this report corrects in Section 8. Throughout this report, positions are anchored to the unambiguous, present-day visitor's-eye-view order of the four completed faces — Washington, Jefferson, Roosevelt, Lincoln, left to right as seen from the Grand View Terrace — which is not in dispute in any source consulted.

2.2 Scope of review

This report evaluates the public evidentiary record concerning the proposal to add a fifth presidential face to Mount Rushmore. It does not independently determine, and takes no position on, whether an additional carving should or should not occur; that is a policy, legal, and cultural question outside this report's scope. Where this report describes obstacles as “confirmed” or “strongly supported,” that characterizes the strength of the public evidentiary record, not a recommendation.

2.3 Limitations of this report

This report relies on publicly available engineering literature, NPS and USGS publications, publicly attributed statements by professionals familiar with the memorial, and contemporary news reporting. It does not include, and the author has not sought or obtained, any proprietary geotechnical investigation, unpublished NPS engineering memoranda, subsurface drilling records, finite-element or other numerical

stability modeling, or direct field inspection of the rock mass. Where named professionals (Section 7) are quoted via press reporting rather than a published technical report, this report treats that as strong but secondary evidence — consistent with, but not equivalent to, a peer-reviewed or agency-published engineering study.

3. Current Status as of July 4, 2026

3.1 Political and legislative developments

On July 3–4, 2026, President Trump traveled to Mount Rushmore for America's 250th-anniversary Independence Day events, including a speech and fireworks display; the White House press office told reporters there would be “no better addition” to the memorial than Trump, per the Washington Post (July 4, 2026), though the President has not explicitly and publicly requested the addition himself.

The legislative vehicle is H.R. 792 (119th Congress), a one-page bill introduced by Rep. Anna Paulina Luna (R-FL) on January 28, 2025, directing the Secretary of the Interior to arrange for the carving of Trump's figure on the memorial. Per Congress.gov/GovInfo records, it was referred to the House Committee on Natural Resources, where, as of mid-2026 reporting (LegalClarity; CNN, July 3, 2026), it has received no hearing, no vote, and no cosponsors.

CNN's own reporting — an editorial assessment, not a legal fact — characterizes the bill's prospects in the Senate, where Democratic votes would be required, as having “little to no chance at clearing.” Separately, Rep. Andy Ogles (R-TN) urged Secretary Burgum to pursue the addition in a 2025 social-media post.

Interior Secretary Doug Burgum raised the idea publicly in a March 2025 Fox News interview with Lara Trump, the President's daughter-in-law. Outlets word his remark slightly differently — “They certainly have room for it there” (E! Online, LegalClarity) versus “They definitely have room” (New York Times, via the Mercury News) — a minor discrepancy flagged here rather than silently resolved. In substance, every version agrees Burgum expressed confidence that room exists, without citing supporting engineering evidence.

Context: in 2023, Rep. Dusty Johnson (R-SD) introduced a “Mount Rushmore Protection Act” that would have barred federal funds from altering, changing, destroying, or removing any face or feature on the memorial; the NPS itself opposed that bill on the grounds that it could hamper the agency's ability to properly maintain the site — illustrating that the NPS's opposition to alteration is not blanket opposition to all legislative activity concerning the memorial, only to alteration of the sculpture itself.

Separately, an April 1, 2026 Daily Mail article (an April Fools' joke built on an AI-generated image, later confirmed as such and debunked by Snopes and PrimeTimer) falsely claimed sculptors had begun carving Trump's face into the mountain; this is not connected to any actual NPS activity.

3.2 Distinguishing political statements from technical evidence

Note on evidentiary weight. The White House comment, Secretary Burgum's remark, and Rep. Luna's bill are political and legislative positions. They are not technical assessments of the rock mass, and this report does not treat them as such. The technical record — developed in Sections 4–10 below — rests on the NPS's own statement and on named engineering professionals, and it directly contradicts Secretary Burgum's public remark, notwithstanding that he leads the department responsible for the memorial. This is treated here as evidence of a policy-versus-technical split within the executive branch, not as a live engineering dispute between two comparably qualified sources.

4. Geologic Setting (Verified)

Mount Rushmore sits within the central Black Hills Uplift, an asymmetric domal uplift covering roughly 0.8 million hectares (2 million acres) along the South Dakota–Wyoming border. The uplift developed roughly 70–60 million years ago (Paleocene, Laramide Orogeny), during which Paleozoic and Mesozoic sedimentary cover eroded away to expose a Precambrian crystalline core roughly 1.6–2.5 billion years old. This is directly confirmed by the NPS Geodiversity Atlas.

The memorial lies on the northwest margin of what was historically named the Harney Peak Granite batholith. Following the 2016 renaming of Harney Peak to Black Elk Peak, current NPS and geological literature increasingly uses “Black Elk Peak Granite” for the same rock unit. To avoid inconsistent terminology, this report standardizes on “Harney Peak Granite” for the remainder of the text, except where quoting a source that uses the newer name, and uses “an additional presidential face” as its standard term for the proposed carving, treating “bust,” “head,” “figure,” and “likeness” as synonyms adopted only when quoting a source that uses them.

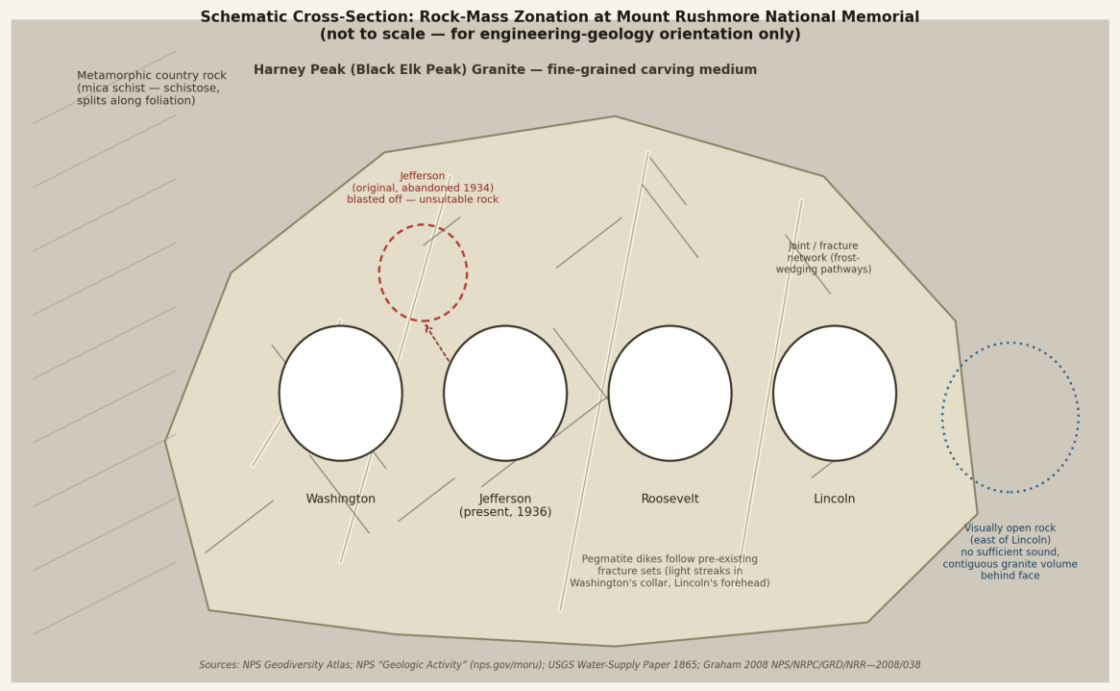

Figure 1. Schematic rock-mass cross-section (not to scale), illustrating the granite carving medium, pegmatite dikes, joint/fracture network, surrounding schist, the abandoned original Jefferson location, and the informally cited “open” area east of Lincoln. Compiled from NPS and USGS descriptions.

5. Rock Types and Material Suitability (Verified)

This matters to the feasibility question directly: a monumental carving needs not just exposed rock, but a large, internally consistent volume of one favorable rock type behind the surface, and the original design record shows that volume is not uniformly available across the mountain.

The NPS documents the underlying material directly: molten rock intruded the Black Hills roughly 1.6 billion years ago, cooling unevenly into fine-grained granite (the carving medium) and coarser pegmatite. “A large block of fine grained granite now forms the upper portion of Mount Rushmore, providing an excellent carving medium for Gutzon Borglum,” per the NPS. The surrounding, interlayered metamorphic rock is predominantly mica schist, formed from Precambrian shale under heat and pressure, plus some quartzite formed from sandstone. Schist acquired “schistosity” — a tendency to break along thin planes — during metamorphism, while granite remained comparatively massive and slow-eroding.

Why intact rock strength is not the controlling variable. Granite is, by itself, a strong rock, and it is tempting to reason that more of it can therefore safely be carved. That reasoning does not hold for large rock excavations. Stability is governed primarily by discontinuities — joints, fractures, pegmatite contacts, and schistose zones — and by their orientation, spacing, persistence, and water content, not by the compressive strength of the intact granite between them. This is a standard engineering-geology principle, reflected throughout the NPS and USGS sources cited here, and it is the reason a visually solid cliff face can still be a poor candidate for excavation.

6. Structural Discontinuities: Joints, Pegmatite Dikes, and Schistosity (Verified)

The 1970 USGS Water-Supply Paper on the memorial's hydrogeology independently confirms this: pegmatite sills and dikes are “numerous” throughout the memorial, and groundwater occurrence “is dependent upon the presence of joints and fractures in the schist and granite bedrock.” The 2008 NPS Geologic Resource Evaluation Report (Graham 2008) adds that mica schist intruded by granite or pegmatite is measurably more fractured than schist alone.

The pegmatite dikes are not a minor curiosity: they are the light-colored streaks visible in George Washington's stone collar and in Jefferson's and Lincoln's foreheads, described by independent geological sources (Brooklyn College's “Rocks of Famous Monuments” resource; NPS materials) as fractures that were later “patched” with molten pegmatite — meaning the dikes mark pre-existing zones of weakness, not a decorative pattern.

7. Independent Professional and Institutional Engineering Assessments

General NPS geology pages establish the rock-mass characteristics that make new carving risky (Sections 4–6). This section adds independent engineering testimony that strengthens that conclusion beyond general inference.

RESPEC is the rock-mechanics engineering firm responsible for monitoring the memorial, a role it has held since 1989; its Rock Block Monitoring System has tracked movement and temperature at more than two dozen points on the sculpture since 1998. Paul Nelson, the geomechanical engineer who supervised that monitoring program, has stated on the record — in reporting by the New York Times, NBC News, and other outlets — that adding a face is “extremely difficult, if not impossible” because of existing fractures in the granite: “One of the concerns about an additional face is that you could activate these fractures. If you remove material, you could be removing support.” NBC News quotes him more bluntly: “It comes down to the geology, the engineering ... It just can't be done.” Nelson has also described the mechanism directly: to reach competent rock for any new carving, “you have to remove a lot of rock to get down to the competent rock, and you run the risk of maybe mobilizing some fractures.”

Monitoring informs feasibility; it does not by itself establish it. RESPEC's Rock Block Monitoring System is a movement- and crack-tracking program — it documents how the existing sculpture is behaving, not a forward-looking excavation design study for a hypothetical new carving. Nelson's professional judgment draws on that monitoring experience and on general rock-mechanics principles to assess a new excavation's risk; it is properly read as expert professional opinion informed by monitoring data, not as the output of a dedicated feasibility or design study for a fifth face. This distinction matters and is preserved throughout this report's confidence labeling (Section 15).

David Barna, a former NPS spokesperson and geologist who previously worked for the U.S. Bureau of Mines, is reported (via E&E News, as cited by LegalClarity) to have said there is not “sufficiently stable rock that could be carved without putting the rest of the memorial at risk of damage.” Dan Wenk, superintendent of the memorial from 1985 to 2001, has said in multiple interviews that the surrounding rock is “not suitable for carving” because it is “very fractured, it's very soft,” drawing the analogy that no one would add a figure to Leonardo da Vinci's The Last Supper: “You don't change great art.”

For balance: in 2017, Texas stone-carver Stuart Simpson argued (reported by the Austin American-Statesman) that modern 3-D scanning and computer-modeling technology could make an additional carving feasible. This dissent is noted for completeness, but it does not carry comparable evidentiary weight — it comes from a single tradesperson rather than a geomechanical engineer, has not engaged with the specific fracture-mobilization mechanism Nelson describes, and has not gained traction with the NPS or with any engineering professional who monitors the site.

8. The Jefferson Relocation: Historical Record and a Note on Directional Language

Historical record. Some accounts of Mount Rushmore's construction describe Jefferson's original carving location inconsistently, so the sequence is worth stating precisely. Jefferson's carving originally began on

the side of Washington opposite his present location; after roughly 18 months to two years of work the granite there proved too fractured and unstable, and Borglum ordered the partially carved face dynamited off the mountain in 1934. The figure was restarted on the other side of Washington — the position dedicated in 1936 and visible today, immediately to Washington's side in the well-established visitor's-eye-view order Washington–Jefferson–Roosevelt–Lincoln.

As flagged in Section 2, press accounts use “left” and “right” inconsistently depending on whether they mean Washington's own anatomical sides or the visitor's sides facing the mountain — for example, an August 2025 NBC News account describes the move in the opposite left/right terms used by other outlets, while still agreeing on the underlying sequence of events (unsuitable rock → dynamited → restarted). This report resolves the ambiguity by anchoring to the undisputed present-day visual order rather than to either left/right convention alone. The underlying engineering point is well documented regardless of framing: the original project itself hit unusable rock and had to abandon a partially executed design.

The same rock-quality problem affected Lincoln's position: his head was relocated from where Borglum had originally planned a 150-year commemorative tablet inscription, after the tablet site proved unworkable and the space was needed for Lincoln's face instead. Congress's 1939 directive limiting further work strictly to the faces (rather than the originally planned waist-length figures) is a further, independent instance of the same rock- and resource-driven scope reduction.

9. Borglum's Own Assessment: Direct Historical Evidence

Sculptor Gutzon Borglum's own contemporaneous judgment is the strongest anchor for this line of argument. On July 9, 1936, Borglum wrote to First Lady Eleanor Roosevelt, who had asked whether suffragist Susan B. Anthony could be added to the memorial (a request that also had legislative backing that year from Sen. Arthur Capper of Kansas and Sen. Royal Copeland of New York). Borglum's letter is held in the digital collection of the Theodore Roosevelt Center at Dickinson State University (Record ID o292026) and is quoted at length in E&E News reporting by Jennifer Yachnin (July 7, 2025). In it, Borglum explained that “the sole purpose of the memorial [is] to create on a mountain a brief, definite statement of the conception, the founding, growth and the preservation of the union,” and that only Washington, Jefferson, Lincoln, and Roosevelt would be carved. He added: “The stone limitations are so serious, that I doubt if it would be possible to change the composition, which is fixed, in any way to include a fifth head.” This is a first-person, contemporaneous engineering judgment from the person with the most direct knowledge of the rock mass, made while the memorial was still under active construction, and it is now traceable to an archived original document rather than to secondary reporting alone.

10. Monitoring and Dynamic Response: The Kent State Research and Its Relationship to Ongoing Engineering Monitoring

Dating and scope. The Kent State news release describing fracture-mapping, LiDAR, and rock-sample research at the memorial (“Can Fireworks Damage Mount Rushmore? Kent State Researchers Study the

Stability of National Monument," led by Dr. Abdul Shakoor) is dated 2014 — not recent as of 2026, and worth dating precisely given how much has changed politically since. Its substance remains directly relevant: researchers mapped fractures, collected granite, pegmatite, and schist samples, and used LiDAR to study fracture orientation and the potential for fireworks-vibration-driven cumulative movement.

This is a distinct effort from the memorial's ongoing, current engineering monitoring: RESPEC's Rock Block Monitoring System, described in Section 7, has tracked movement and temperature at over two dozen points since 1998 and remains active, including routine on-site crack inspection and resealing work documented as recently as this year by the Rapid City Journal. These are two separate efforts — a one-time 2014 academic study and a long-running (1998–present) engineering monitoring program — and only the latter is properly described as ongoing.

11. Weathering, Frost Wedging, and Active Maintenance (Verified)

The NPS "Geologic Activity" page documents the mechanism directly. Granite erosion at the exposed faces is extremely slow — on the order of one-tenth of an inch per thousand years — but frost wedging is identified as "a more significant erosional force" than surface weathering: water enters natural cracks, expands on freezing, and gradually widens them. This is countered by "the caulking of cracks on the memorial with a silicon solution that prevents water from entering the cracks," an ongoing, active practice, not a one-time historical treatment — consistent with the Rapid City Journal's on-site description of RESPEC crews resealing cracks on Jefferson's and Roosevelt's faces. The NPS's own summary is direct: "Water is the main erosive force threatening to make any real change to the mountain."

12. Preservation Policy and the NPS Position (Verified)

The NPS told the New York Times, in a statement published June 27, 2025: "The carved portion of Mount Rushmore has been thoroughly evaluated, and there are no viable locations left for additional carvings." Historian Stephen Hausmann (Appalachian State University) told Newsweek in 2026 that "there's just not the space on Mount Rushmore as it exists to carve another face on there," noting the existing carvings only happened after substantial redesign and "almost didn't happen for a number of reasons."

The Department of the Interior's own preservation standards — 36 C.F.R. Part 68, The Secretary of the Interior's Standards for the Treatment of Historic Properties — state that work on a preserved property "generally focuses upon the ongoing maintenance and repair of historic materials and features rather than extensive replacement and new construction," and that "new exterior additions are not within the scope of" preservation treatment. That is the specific, citable regulatory basis for the NPS's general policy position.

Definition. Neither the NPS nor most press coverage explicitly defines "viable." For this report, a "viable" location is one with sufficient lateral and depth extent of sound, contiguous, favorably jointed granite;

structural stability under both excavation loading and long-term weathering; practical accessibility for carving and finishing; and long-term maintainability consistent with the existing preservation regime. On that working definition, the evidence assembled here supports the NPS's conclusion that no such location remains.

13. Governance and Legal Obstacles (Verified)

Mount Rushmore is listed on the National Register of Historic Places and is a unit of the National Park System under the Department of the Interior. Northeastern University law professor Jeremy Paul told Northeastern Global News (June 30, 2025) that a sitting president could not unilaterally order a carving added; congressional approval would likely be required, and federal action would trigger review under both the National Historic Preservation Act (Section 106) and the National Environmental Policy Act.

Paul added a pointed observation directly relevant to this report's structure: “If there truly is no room, then the whole question is moot ... That would put an end to this” — i.e., the engineering question, if settled, could make the legal question unnecessary to resolve.

H.R. 792 (119th Congress), introduced by Rep. Luna on January 28, 2025, remains the only concrete legislative vehicle. As of mid-2026 it has not advanced out of the House Committee on Natural Resources and has attracted no cosponsors; CNN's assessment that it has “little to no chance at clearing the Senate” is that outlet's editorial characterization, not a procedural fact, and is attributed here as such.

14. Cultural and Historical Obstacles (Verified)

14.1 Treaty history

Under the 1868 Fort Laramie Treaty, the United States pledged that the Great Sioux Reservation — including the Black Hills — would be set apart for the “absolute and undisturbed use and occupation” of the Sioux Nation, with any cession requiring signatures from at least three-fourths of the tribe's adult male population. Following the 1874 discovery of gold during an expedition led by Custer, and subsequent settlement pressure, Congress unilaterally abrogated the treaty in 1877 based on an agreement signed by only about 10 percent of eligible Sioux men.

In United States v. Sioux Nation of Indians, 448 U.S. 371 (1980), the U.S. Supreme Court held 8–1 that the 1877 taking violated the Fifth Amendment and required just compensation with interest; Justice Blackmun's opinion described the government's dealings as “a more ripe and rank case of dishonorable dealings” than any other in the nation's history. The Sioux Nation has refused the compensation (now worth well over $1 billion, with the Oglala Sioux Tribe reportedly resisting disclosure of the exact current balance) on the grounds that their objective is the return of the land, not payment for it.

14.2 Present-day procedural relevance

This history is not background color for a federal construction project on this land: it establishes that the underlying real property itself carries an adjudicated history of unlawful taking, which is the kind of fact that increases the likelihood of legal challenge, political resistance, and heightened review, rather than one that operates as a self-executing bar. This report therefore describes the Black Hills' legal status as a major and potentially case-shaping obstacle with unusually strong historical and legal grounding — rather than as an unqualified, "independently sufficient" legal bar — because no specific procedural vehicle (for example, a pending injunction, a recognized cause of action targeting this specific project, or a title claim actually covering the memorial parcel) was identified that would, on its own, block a hypothetical carving project irrespective of the engineering and preservation-policy findings above.

Indigenous advocacy organizations, including the NDN Collective, have separately called for the closure of Mount Rushmore altogether and the return of the Black Hills to the Lakota; the Oglala Sioux and Standing Rock Sioux tribal councils have reportedly sought government-to-government consultation with Secretary Burgum on unresolved land claims. These positions reinforce the general point that any new federal construction at this site would proceed against a backdrop of unresolved and legally significant land dispute, independent of whether the specific carving is geologically possible.

15. Confidence Legend and Key Findings Summary

The labels used throughout this report and in the table below are defined as follows, so that the distinctions are methodical rather than intuitive:

Label used in this report	Evidentiary threshold
CONFIRMED	A direct quotation, dated statement, or specific factual claim was checked against a primary or named source and matches.
STRONGLY SUPPORTED / INDEPENDENTLY CORROBORATED	Multiple independent authoritative sources agree on a conclusion, but no single original site-specific study (e.g., a dedicated geotechnical design report for a fifth bust) was identified to establish it as a formal engineering finding.
CORRECTS A COMMON MISSTATEMENT	A claim that recurs in general press or online coverage but conflicts with primary or authoritative sources, and is corrected here (e.g., direction, date, or attribution reversed).
ANALYSIS / PROGNOSIS	A predictive or evaluative judgment (e.g., a bill's chances of passage) that is properly attributed to the outlet or analyst who made it, not stated as settled fact.
INSUFFICIENT EVIDENCE	Neither confirmed nor contradicted; the public record does not currently contain enough information to establish the claim either way.

Finding	Confidence	Primary basis
No geologically/engineering-viable location remains for another bust	STRONGLY SUPPORTED	NPS statement to New York Times, published June 27, 2025; named

		engineering assessments (Paul Nelson/RESPEC; David Barna), Section 7
Granite vs. mica schist vs. pegmatite composition and behavior	CONFIRMED	NPS “Geologic Activity” page; USGS Water-Supply Paper 1865; Graham 2008 NPS/NRR—2008/038
Frost wedging and silicon-sealant crack maintenance	CONFIRMED	NPS “Geologic Activity” page; Rapid City Journal on-site RESPEC crack-resealing reporting
Kent State fracture-mapping / LiDAR / fireworks-vibration study, correctly dated	CORRECTS A COMMON MISSTATEMENT (sometimes described as “recent”)	Kent State University news release, dated 2014, not recent as of 2026; distinct from RESPEC's ongoing Rock Block Monitoring System
Congressional approval likely required; NHPA/NEPA review would apply	CONFIRMED	Northeastern Global News interview with Prof. Jeremy Paul (June 2025)
Direction of Jefferson's original, abandoned carving location	CORRECTS A COMMON MISSTATEMENT (direction is often reported inconsistently)	Jefferson began on the side later occupied by no one — the visitor's right of Washington — and was relocated to the visitor's left (present position); see Section 8 for a note on left/right framing across sources
Cultural/legal significance of the Black Hills to the Lakota	CONFIRMED	1868 Fort Laramie Treaty; United States v. Sioux Nation of Indians, 448 U.S. 371 (1980)
Existence and exact wording of Borglum's 1936 letter opposing a fifth head	CONFIRMED	Original letter (to Eleanor Roosevelt, July 9, 1936) held in the Theodore Roosevelt Center Digital Library, Record ID o292026; quoted at length in E&E News (Jennifer Yachnin, July 7, 2025)

16. Updated Risk Matrix

Risk category	Nature of the obstacle	Verification
Competent rock availability	No sufficiently large, continuous, favorable granite mass identified for a 60-ft carving	STRONGLY SUPPORTED — NPS/NYT (June 27, 2025); named engineers Paul Nelson and David Barna
Fractures and joints	Natural cracks and joints control long-term stability; widened by freeze-thaw	CONFIRMED — NPS "Geologic Activity" page; RESPEC (Nelson)
Pegmatite dikes / lithologic variability	Pegmatite intrusions and granite-schist contacts create heterogeneity	CONFIRMED — USGS WSP 1865; NPS GRE Report (Graham 2008)
Schistosity / metamorphic contacts	Mica schist splits along foliation and weathers faster than granite	CONFIRMED — NPS "Geologic Activity" page
Weathering and water ingress	Frost wedging propagates cracks; active silicon-sealant maintenance required	CONFIRMED — NPS page; ongoing RESPEC crack-resealing (Rapid City Journal)
Dynamic disturbance / long-term monitoring	Repeated vibration can move fractures cumulatively; a dedicated Rock Block Monitoring System has tracked movement since 1998	CONFIRMED but the Kent State study specifically is dated 2014, not "recent"
Original design limits	Jefferson relocation and Lincoln repositioning reflect real rock limitations	CONFIRMED, with a note on frame-of-reference ambiguity in how the direction is commonly described
Preservation policy	NPS considers the memorial a completed work of art with no room for further carving	CONFIRMED — NPS statement to New York Times, June 27, 2025
Federal approval requirements	Congressional action needed; National Register listing invokes NHPA Section 106 and, for federal action, NEPA review	CONFIRMED — Northeastern Global News; National Register of Historic Places listing
Legislative status	H.R. 792 (119th Congress), introduced Jan. 28, 2025, referred to House Natural Resources Committee; no hearing, vote, or cosponsor as of mid-2026	CONFIRMED — Congress.gov/GovInfo bill record; Newsweek, CNN, LegalClarity reporting
Cultural and public controversy / legal title	Black Hills are sacred to the Lakota; 1868 treaty and 1980 Supreme Court ruling establish the land was taken unlawfully	CONFIRMED and substantially strengthened with primary legal citation; framed as a major, litigation-prone obstacle rather than an unqualified legal bar (see Section 14)

17. Evidence Hierarchy

The figure below summarizes how this report's overall conclusion is built upward from primary sources, rather than asserted first and supported afterward.

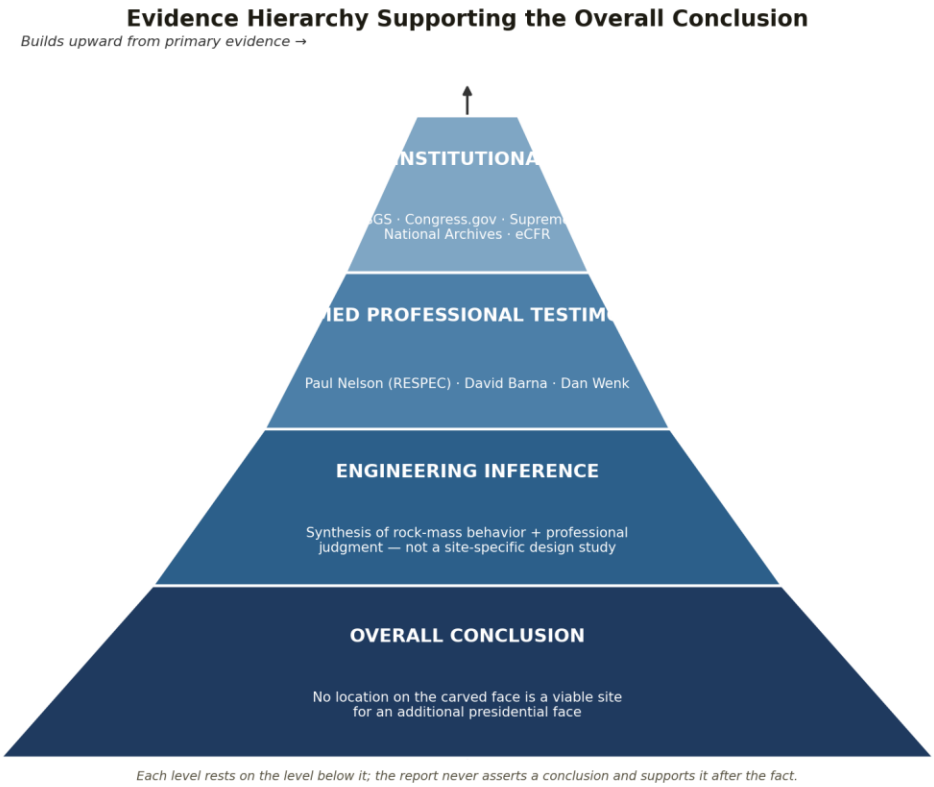
Evidence Hierarchy Supporting the Overall Conclusion
Builds upward from primary evidence →
NSTITUTIONA
GS · Congress.gov · Suprem
National Archives · eCFR
IED PROFESSIONAL TESTIM
Paul Nelson (RESPEC) · David Barna · Dan Wenk
ENGINEERING INFERENCE
Synthesis of rock-mass behavior + professional judgment — not a site-specific design study
OVERALL CONCLUSION
No location on the carved face is a viable site for an additional presidential face
Each level rests on the level below it; the report never asserts a conclusion and supports it after the fact.

Figure 2. Evidence hierarchy supporting the overall conclusion. Each level rests on, and is scoped by, the level below it.

18. Overall Assessment

Restating the hierarchy of confidence used throughout this report, from strongest to weakest evidentiary basis: (1) confirmed institutional statements and named-professional quotations checked against primary or directly attributed reporting — the NPS's June 27, 2025 statement to the New York Times, and on-the-record comments from Paul Nelson, David Barna, and Dan Wenk; and (2) confirmed geologic description — the NPS, USGS, and 2008 NPS Geologic Resource Evaluation Report's account of granite, schist, pegmatite, jointing, and frost-wedging.

Beyond those two confirmed tiers: (3) supported engineering inference — the conclusion that no location on the carved face is viable, which follows from (1) and (2) but has not been established here by a dedicated, published, site-specific geotechnical design study; and (4) unsettled political and legal outcome — whether Congress, the courts, or public pressure will ever force the question, which remains genuinely open and is not something this report can resolve.

On that hierarchy, the central conclusions of this report hold up well: the existing sculpture already requires active, ongoing maintenance against fracture-driven deterioration; the NPS's own position is that the carved portion is complete; and any legally durable path forward would require congressional action plus NHPA/NEPA review. This report's most significant contributions are the named engineering professionals in Section 7, which strengthen the engineering conclusion by adding professional judgment to the existing geological evidence, and the precisely scoped treatment of the Black Hills' legal

status in Section 14, which avoids overstating a complex legal and political situation as a simple, self-executing bar.

As of July 4, 2026, no carving has been authorized, funded, or initiated. The matter remains at the level of presidential musing, a single stalled bill with no cosponsors, and one Cabinet secretary's public remark that conflicts with his own department's stated technical position and with the named engineers who monitor the site.

19. Full Reference List

Citation note. Internet news URLs and online government resources were current and accessible as of July 4, 2026. Readers should expect some URLs or webpage structures to change over time.

1. NPS Geodiversity Atlas — Mount Rushmore National Memorial, South Dakota — https://www.nps.gov/articles/nps-geodiversity-atlas-mount-rushmore-national-memorial-south-dakota.htm

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20. Document Control

Version 2.0 — July 4, 2026. Current version. Covers geologic setting, rock types and structural discontinuities, named engineering monitoring and testimony, historical construction record, preservation policy, federal governance and legislative status, and the legal history of the Black Hills, each labeled with a confidence level per the legend in Section 15.

Version 2.1 — July 4, 2026. Added the original archival citation for Borglum's 1936 letter (Theodore Roosevelt Center Digital Library, Record ID o292026) and E&E News sourcing; minor language edits for tone and clarity.

Version 2.2 — July 4, 2026. Added a citation note on link permanence before the reference list; enlarged the Evidence Hierarchy figure (Section 17); added a running footer with document title, version, and page numbers; minor wording refinements in the Executive Summary and Section 18 to avoid implying professional judgment replaces, rather than supplements, geological evidence.